that both the birds were adults and belonged to a pair. Such feeding activity is considered to be a prelude to the commencement of breeding (Welty 1982).

Further, the birds were seen feeding on *C. dicoccuun* thrice and on *Ficus nervosa* once. On all the occasions they were seen in pairs. On 13 April a bird which was sitting on a huge boulder flew up on the trunk of a *Anogeissus latifolia* tree and perched upright in a manner typical of woodpeckers.

The present report of *P. xantholaenus* is the first ever of the species from Shevaroys. The observation on the food habits indicates that *C. dicoccum* and *F. nervosa* are two new food sources of Yellowthroated Bulbul not

recorded earlier. Also, the fact that the birds were indulging in courtship feeding and carrying nesting material indicate nesting activity of the species, and this also happens to be the first ever record of the species breeding outside their designated nesting period as recorded by Ali and Ripley (1987) and Allen (1908). It appears that at Shevaroys the species commences its breeding activity as early as March.

February 14, 1994

S. KARTHIKEYAN

24, Opp. Banashankari Temple 8th Block Jayanagar P.O. Bangalore-560 082.

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19. STONE CHAT SAXICOLA TORQUATA (LINN.) IN KERALA

According to SYNOPSIS (S.D. Ripley 1982, BNHS, Bombay) the distributional range of the race *indica* of *Saxicola torquata* extends to southern Karnataka in the Indian peninsula. Baker and Inglis in BIRDS OF SOUTHERN INDIA (1930, Madras Government Press, Madras) state that this race occurs in winter in the hills of north Mysore and Travancore, quoting Stuart Baker, though they did not find it anywhere in the Madras Presidency. Sálim Ali did not include this species in BIRDS OF KERALA (1969, Oxford Unviersity Press, Delhi) nor is it included in A BOOK OF KERALA BIRDS (Neelakantan, K.K. *et al.* 1993, WWF-India, Trivandrum).

On 19 October 1993, during a birdwatching trip to Kattampalli (11° 55' N; 75° 20' E), a wetland near Kannur, we came across two pairs of Stone Chats-two males and two females. Three of these were perched on small bushes (*Crotalaria* sp.) and grass tussocks on the bund at the water's edge. One male could be observed clearly for a long time as it perched on top of a mound of straw in the field, making short ariel sallies to eatch insects like a flycatcher.

The male birds appeared to be in the autumn moult—the black of head and throat had changed in dark rufous except for an eye-streak from the lores to the ear-coverts. They had rufous breast, black tail tipped buff and white upper tail-coverts. The female birds were light brownish overall with streaked upperparts, buffish white underparts, black tail and pale rump and upper tail-coverts. The white half collar on either side of the neck in the male birds was clearly visible. The white wing patches were not visible on closed wings, but could be clearly seen when the birds flew. The birds were seen flicking their wings and tail frequently.

One of us (CS) has been regularly visiting Kattampalli since 1980, but never came across this species before. This is the first record of this species in Kerala to the best of our knowledge.

February 14, 1994

C. SASHIKUMAR JAFER PALOT T. PRAVEEN

9 Subhash Nagar, Kannur 670 002, Kerala.

20. WINTERING OF INDIAN BLUE CHAT *ERITHACUS BRUNNEUS* (HODGSON) AND PIED GROUND THRUSH *ZOOTHERA WARDII* (BLYTH) AT NANDI HILLS, SOUTH INDIA

Nandi Hills (13° 22' N, 77° 41' E), a popular hill resort and picnic spot in Kolar district, Karnataka is located about 60 km north of Bangalore. Known also as the Nandi Durg, it is the tallest hillock (1435 m above MSL) within the 28.37 sq. km Nandi State Forest and supports a rich

variety of flora and fauna (Boraiah and Fatima 1970, Ali 1942, Ghorpade *et al.* 1974).

The hill-top plateau of Nandi Hills has a small patch of evergreen forest with coffee plantations. *Coffea arabica, C. iginoides* and *C. robusta,* which appears to

Table 1
DETAILS OF E. brunneus AND Z. wardii SIGHTED AT NANDI HILLS

Date of visit	Area	Number of bird <i>E. brunneus</i>		ds sighted Z. wardii		Observers
		Male	Female	Male	Female	
29 March 1991	Coffee plantation	3	1			JNP, SS
	Water's edge in evergreen patch	,		1		JNP, SS
30 March 1991	Coffee plantation	1				JNP, SS
	Water's edge in evergreen patch			1		
17 April 1991	Coffee plantation		4			LS*
5 November 1991	Coffee plantation	1	1	2	1	LS*
10 November 1991	Coffee plantation			1	1	JNP, SK
	Nursery	1	1			JNP, SK
22 December 1991	Nursery	1	1			JNP, SK
9 January 1992	Nursery	1		1		JNP, SK

^{*} LS = L. Shyamal pers. comm.

have been planted by the Britishers after the conquest of the hill in 1791 now grows in a wild state and is not harvested. Coffee mixed with other shrubbery provides an ample undergrowth offering an ideal habitat for thrushes. In fact, species like Blue-headed Rock Thrush Monticola cinclorlynchus, White-throated Ground Thrush Zoothera citrina cyanotus, Black Bird Turdus merula, Indian Pitta Pitta brachyura can be frequently seen in the season. Adjoining this patch is a horticultural nursery spread over about an acre and is maintained by the State Horticultural Department. With its dense tree canopy, the area provides adequate shade for maintenance of potted plants.

The previous avifaunal surveys at Nandi hills (Ali 1942, Ghorpade *et al.* 1974) do not report the occurrence of two bird species, namely the Indian Blue Chat *Erithacus brunneus* (Hodgson) and Pied Ground Thrush *Zoothera wardii* (Blyth). In this article, we report our observations on the two species made at Nandi hills.

A total of seven visits were made to the area as a part of a much larger avifaunal survey of the hills (e.g. Subramanya *et al.* 1991) between March 1991 and January 1992 and a total of twelve *E. brunneus* and eight *Z. wardii* were sighted. The details on the visits, habitats

where the birds were seen and their sex by different observers are presented in Table 1.

INDIAN BLUE CHAT: On all occassions when the species were seen, the birds were observed moving about within the two areas, namely the evergreen patch and the nursery, often foraging among leaf litter looking for hidden prey. These areas frequented by *E. brunneus* were shared by *P. brachyura*, *Z. citrina*, *M. cinclorhynchus* and the Tailor Bird *Orthotonus sutorius*.

On 30 March 1991, a male *E. brunneus* was observed giving out a triple noted call and as if in response a *P. brachyura* that foraged in the area also started calling. A little later another male was osberved in the horticultural nursery calling (towards a female?) as it moved among the pots. When a female approached closer, the male started to call loudly, opening and closing its wings that were held drooping. The male also kept twitching its tail up and down constantly. When it approached too close, the female chased the male and resumed foraging. The male flew up to a nearby branch of a *Salix tetrasperma* tree and started calling. Later it alighted on the ground.

A male was again observed calling and displaying similarly two hours later in the same area but no female

could be seen anywhere close by. Also, the displaying male was observed chasing away a foraging *O. sutorius* and *M. cinclorhynchus* when perched close by.

However, on 22 December 1991, a female was observed promptly answering the high pitched call note by a male, with a single short note (*tweet*). Upon disturbance the male flew up to an overhanging branch and started swaying from side to side while uttering a low *kit-kit-kit.*, call.

PIED GROUND THRUSH: A male of this species was first sighted at Nandi hills on 29 March 1991 by two of us (JNP, SS) busily foraging, overturning fallen dry leaves along the edge of the Pathalaganga, a small pond between the evergreen patch and the nursery. Later it was seen along the edge of yet another large pond Amruth ganga, a water tank constructed in stone with steps going down to the bottom, the male was observed foraging amidst fallen leaves unmindful of a Spotted Babbler *Pellorneum ruficeps* and Magpie Robin *Copsychus saularis* in the same area and on the next day it was foraging along with *E. brunneus*. It was observed tossing dry leaves most of the day along the water's edge. Once it was noticed hopping amongst pots in the nursery and also once in the coffee plantation.

The species was again observed in the same area between 5 November 1991 (L. Shyamal, pers. comm.) and 9 January 1992 (see Table 1).

Both the species discussed above, winter in Sri Lanka. In addition *E. brunneus* is also known to winter in the hills of western India (Ali and Ripley 1987). Also both the species have been observed in passage at Bangalore

(Karthikeyan 1992, Prasad and Srinivasa 1992, Shyamal 1989). *Z. wardii* has been reported as wintering at Yercaud in the Shevroy hills, Tamil Nadu (Kazmierczak 1991). Our observations on the continued presence of the individuals of the species during winter and early summer at Nandi hills clearly indicate that the individuals were those spending their winter. Thus, Nandi hills happens to be hitherto unknown winter quarters of both *E. brunneus* and *Z. wardii*.

Also, though the frequency of sightings of females were less, our observations on the occurrence of both the sexes of *E. brunneus* together at Nandi Hill refutes the claim made by Khan (1980) that both the sexes of *E. brunneus* do not move together and that females spend their winters away from males.

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J. N. PRASAD Merlin Nature Club, No. 13, 8th cross, 30th main, J.P. Nagar I phase, Bangalore-560 078.

S. KARTHIKEYAN

No. 24, opp. Banashankari Temple, 8th block Jayanagar P.O., Shakambarinagar, Bangalore-560 082.

S. SUBRAMANYA

HPHT scheme, J-Block, University of Agricultural Sciences, G.K.V.K. campus, Bangalore-560 065.

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21. SIMPLIFIED FIELD TECHNIQUE FOR OBTAINING BLOOD FROM FRESHWATER TURTLES

Studies on the biochemical and molecular aspects have now been recognised as essential components of the conservation programme of species. The choice of tissue in such studies has invariably been blood and this has necessitated researchers to look for the best procedure for field sampling without harming or